

APPENDIX L

HAZARDOUS MATERIALS SURVEY REPORT FOR PIER 11



March 10, 2009

Mr. Todd Graham
KPFF Consulting Engineers
400 Oceangate, Suite 500
Long Beach, California 90802

Subject: Hazardous Building Materials Survey Report
Sonar Pier
Pier T, West Basin, IR Site 7 Sediment Cleanup
Port of Long Beach, California

Dear Mr. Graham:

Essentia Management Services, LLC (Essentia) is pleased to provide this letter report summarizing the hazardous building materials survey (HBMS) conducted for the Sonar Pier, Pier T, West Basin, at the Port of Long Beach. It is our understanding that the Port of Long Beach is proposing to demolish the Sonar Pier as part of a sediment cleanup project. In order to prepare project demolition bid specifications, hazardous materials such as asbestos-containing materials (ACMs), lead-based paints (LBPs), and treated wood waste (TWW) were identified. The HBMS was conducted in March and July of 2008 and consisted of the following tasks:

- Asbestos survey;
- Lead-based paint survey; and
- Treated wood sampling.

The following sections summarize the field activities, survey results, and our conclusions and recommendations. Attachment 1 contains tables that summarize the results of our survey. Table 1 presents the results of the ACM survey. Table 2 presents a summary of the x-ray fluorescence (XRF) readings above 0.7 milligrams per square centimeter (mg/cm^2), and Table 3 presents a listing of all of the XRF readings. Tables 4 through 8 present a summary of analytical testing results for treated wood waste. Attachments 2 and 3 present the chain-of-custody records and laboratory analytical reports.

SITE DESCRIPTION

The subject site consists of an approximately 330-foot-long Access Pier that is accessed by a connection with the Navy Mole Pier. Access Pier construction consists of a wood frame structure with wooden hand rails on top of concrete piles. The site also includes an

approximately 240-foot-diameter Circular Pier. An approximately 200-foot-long Timber Pier and Control Building, that formerly connected the Access Pier with the Circular Pier, has reportedly collapsed and remains submerged at this location. For this reason, the Circular Pier was not accessible for this survey. From Essentia's vantage point, the Circular Pier appeared to be constructed of painted metal decking and hand rails on top of concrete piles.

FIELD ACTIVITIES

The following paragraphs describe the asbestos, lead-based paint, and treated wood waste sampling activities. The surveys were conducted in March and July 2008.

Asbestos Survey

Asbestos-containing material (ACM) is defined as material containing greater than one percent (1%) asbestos by the Asbestos Hazard Emergency Response Act (AHERA), United States Environmental Protection Agency (USEPA) National Emissions Standards for Hazardous Air Pollutants (NESHAPS), and the South Coast Air Quality Management District (SCAQMD) regulations. The California Occupational Safety and Health Administration (Cal-OSHA) also requires that contractors and consultants working with building materials with an asbestos content greater than 0.1 percent be registered or certified by the State of California.

The purpose of the asbestos survey is to assess whether ACM is present in construction materials of the site buildings, infrastructure, or utilities. This information is used to identify the location of ACM such that contractors or individuals associated with renovation or demolition can handle, remove, and/or dispose of it to comply with regulatory requirements.

An asbestos survey was conducted to visually identify areas that potentially contained ACM. The survey was conducted by a California Certified Asbestos Consultant.

During the survey, locations were visually assessed to identify areas with accessible homogeneous materials that were suspected to contain ACM. A homogeneous area is defined as containing material that is uniform in color, texture, and function. Samples of the ACM were collected using a razor knife, putty knife, chisel, pliers, forceps, or other tools as required. Samples were collected without causing excessive damage or fiber release from the pier materials. The sampling tools were decontaminated after each sample was collected to reduce the potential of cross contamination. Decontamination procedures consisted of rinsing and wiping the sampling tools clean with a disposable wet towel.

Essentia collected 10 bulk samples of suspect ACMs from various locations on the pier. Materials that were presumed to contain asbestos, but not sampled, were recorded by Essentia as presumed asbestos-containing materials (PACMs). Following collection, each sample of suspect ACM was assessed according to type, condition, and sample location, as summarized in Table 1 (Attachment 1). The samples are identified on the chain-of-custody records and laboratory analytical reports provided as Attachment 2.

The bulk samples of friable and non-friable suspect ACM were placed in plastic bags, sealed, and labeled with a sample identification number. The bulk samples were transported under chain-of-custody protocol to AmeriSci Laboratory located in Carson, California, for analysis according to 40 Code of Federal Regulations (CFR) 763, Subpart F, Appendix A.

Lead-Based Paint Survey

The primary purpose of the LBP survey was to assess whether paint of various substrates at the site contain lead, and if so, at what concentrations. The intended use of this information is to identify the location of LBP or lead-coated materials (LCM) such that contractors and/or individuals associated with renovation, abatement and/or demolition can handle, remove, and/or dispose of it in accordance with regulatory requirements.

LBP is defined by the Housing and Urban Development (HUD) guidelines, 24 CFR part 38 and 40 CFR Part 745, as paint containing 0.5 percent (5,000 parts per million [ppm], or 1 milligram per square centimeter [mg/cm^2]) or greater (using HUD's conversion factor). LBP is alternatively defined by the Los Angeles Department of Health Services (LADHS) as paint containing $0.7 \text{ mg}/\text{cm}^2$ when using an X-ray fluorescence (XRF) spectrum analyzer or 600 milligrams per kilogram (mg/kg) when using laboratory methods to analyze bulk samples such as paint chips. In the State of California, the California Department of Health Services (DHS) (Title 17 California Code of Regulations [CCR], Division 1, Chapter 8) and the Cal-OSHA (Title 8, CCR, Section 1532.1) oversee matters related to LBP abatement and/or demolition. DHS essentially defines LBP in the same manner as HUD. Cal-OSHA essentially defines any surface coating or material containing lead at any concentration to require worker protection. It also considers lead occurring at concentrations greater than 0.06% by weight (600 ppm) in a material to be subject to specific regulations with regards to allowed work practices (e.g. trigger tasks). The term lead-coated materials (LCM) refers to materials that have coatings with detectable concentrations of lead.

In March 2008, the pier was inspected for the presence of LBP according to the 1995 HUD guidelines as modified for demolition in commercial/industrial settings. The LBP survey was completed by a California-certified Lead Inspector/Assessor using a Niton 309 hand-held XRF Spectrum Analyzer with a detection limit of approximately 0.01 mg/cm² (50 ppm). The survey included representative paint analyzed from exterior surfaces and metal features such as pipes, posts, and flashing. The inclusion metal features is pertinent to demolition activities where dust and/or fumes (from metal cutting) may present significant worker safety, airborne dust and/or soil contamination issues, in addition to those related to the presence of LBP.

Treated Wood Waste

Because the treated wood materials may contain chemical contaminants, disposal of treated wood waste (i.e., TWW) is restricted by the Federal Resource Conservation and Recovery Act (RCRA) and the California Hazardous Waste Control Law (CCR Title 22). In addition, California has developed Alternative Management Standards (AMS) for handling and disposal of TWW.

The AMS for TWW are described in a fact sheet titled "Requirements for Generators of Treated Wood Waste (TWW)" that was prepared by the Department of Toxic Substances Control, and dated January 2008. According to the AMS, generators can presume their TWW to be a California-hazardous waste in order to avoid extensive laboratory testing. However, the AMS do not apply to RCRA-hazardous waste. Therefore it is necessary to rely on generator knowledge, or conduct analytical testing, to confirm that TWW is not a RCRA-hazardous waste. The AMS also indicate that the TWW can be disposed of at specific non-hazardous waste landfills, and that the waste becomes non-hazardous after acceptance by the landfill.

The Access Pier consisted of concrete piles that supported a timber frame, deck, and hand rails. The first type of TWW on the Access Pier consists of the support stringers that support the catwalk. The stringers appear to be treated with an oil-type system. The second type of wood comprises the hand rails and supports, which showed a slight greenish discoloration suggesting that the wood had been chemically treated with a waterborne (i.e., metals) system.

Essentia contacted Waste Management (operator of hazardous and non-hazardous waste landfills) to review potential handling and disposal options. According to Waste Management, the treated wood waste will be presumed to be a California Hazardous Waste at any of their landfills. However, a determination was needed to be made regarding whether the wood is a RCRA-hazardous waste. The requirements state that a determination can be made by collecting five representative samples for the first 1,000 cy of each homogenous material type, and one additional sample per each additional 1,000 cy of waste. The samples should then be analyzed for soluble metals by using the Toxicity Characteristic Leaching Procedure (TCLP), volatile organic compounds (VOCs) by EPA method 8260B, and semi-volatile organic compounds (SVOCs) by EPA method 8270C. Additional testing required by this landfill included total petroleum hydrocarbons by EPA method 8015M.

Based on the characteristics of the wood observed during the inspection, Essentia collected samples and conducted laboratory analyses of the two types of wood in general accordance with the Port of Long Beach's "Guideline for Managing Chemically Treated Wood Waste," dated August 22, 2007. The samples were concentrated in accessible areas near the shore, but were judged to be representative of the wood observed. The samples were collected using a hand-held drill fitted with a core bit. The core bit was advanced to approximately one-half the width of the wood being sampled, and the shavings were collected in re-sealable plastic bags. The sample bags were then sealed in a metal container and shipped to Cal Tech Environmental Laboratories of Paramount, California.

Five samples of the oil-type treated wood were given the identifiers listed below.

- SUPPORT BEAM 1/SUPPORT BEAM 1A
- SUPPORT BEAM 2 SUPPORT BEAM 2A
- SUPPORT BEAM 3/SUPPORT BEAM 3A
- SUPPORT BEAM 4
- SUPPORT BEAM 5

Six samples of the water-borne system treated wood were given the identifiers listed below.

- DECK BOARD 1/DECK BOARD 1A
- DECK BOARD 2/DECK BOARD 2A
- DECK BOARD 3/DECK BOARD 3A
- HAND RAIL 1/HAND RAIL 1A
- HAND RAIL 2/HAND RAIL 2A
- HAND RAIL 3/HAND RAIL 3A

The samples were analyzed for TPH by EPA method 8015M, VOCs by EPA method 8260B, SVOCs by EPA method 8270C, and for California Title 22 by EPA method 6010B/7000 series.

RESULTS

This section summarizes the results of the asbestos survey, lead-based paint survey, and the other hazardous materials survey.

Asbestos Survey

Asbestos was detected in various materials throughout the site. Results of the asbestos sampling, including the material sampled, location, concentration, and estimated quantity are presented in Table 1. The locations for samples with detectable concentrations were previously provided to KPFF and will reportedly be illustrated on the final versions of Sheets HD_10-1997-HD1 and HD_10-1997-HD2. Chain-of-custody records and laboratory analytical results are provided as Attachment 2.

Lead-Based Paint Survey

Thirteen of the 37 surfaces tested contained concentrations of lead above the 0.05 mg/cm² detection limit. Results of the XRF testing including sample location, site feature, substrate, color, and XRF reading are presented in Tables 2 (Lead-Based Paint) and 3 (All Readings). The lead sampling locations were previously provided to KPFF and will reportedly be illustrated on the final versions of Sheets HD_10-1997-HD1 and HD_10-1997-HD2.

Treated Wood Waste

The laboratory analytical results revealed detectable concentrations of TPH, VOCs, SVOCs, and metals in the TWW samples. The results of the sampling are summarized in Tables 4 through 8, with analytical laboratory reports included as Attachment 3.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our surveys, the following conclusions and recommendations are provided.

Asbestos Survey

Asbestos was detected in various materials from throughout the site. The presence of ACMs does not necessarily mean that the health of the occupants is endangered. If ACM remains in good condition and is not disturbed, exposures to asbestos fibers are expected to be negligible. However, when ACM deteriorates, is disturbed, or damaged, such as during

renovation or demolition operations, asbestos fibers may be released creating a potential health hazard for building occupants and construction personnel.

Prior to the planned demolition, a licensed abatement contractor should remove the identified ACMs. Essentia recommends the following:

- Adhere to the applicable requirements contained in Specification HD-S2319, Pier T, West Basin, IR Site 7 Sediment Clean-up.
- Remove and properly package prior to demolition or renovation.
- Characterize and dispose of ACMs in accordance with federal, state, and local regulations.

A state-certified asbestos abatement contractor should perform the removal of asbestos (Title 8, CCR, Article 2.5, Sections 314.6-341.14). A third party should provide oversight to ensure that the contractor complies with the specifications and regulations, uses the proper personnel protective equipment and air control measures, and follows proper disposal procedures.

Lead-Based Paint Survey

Detectable concentrations of lead were found on the surfaces of the interior and exterior areas of the site. Federal and California OSHA consider any concentration of lead in paint to require management when conducting renovation or demolition activities. Since many of the representative readings were found to contain lead, the disturbance, renovation, or demolition of these or other similar lead-containing surfaces are covered under the Federal and California OSHA Lead Construction Standards, found in 29 CFR 1926.62 and 8 CCR 1532.1, respectively. Both Federal and California OSHA consider paint to contain lead if the results show any detectable levels. However, 600 ppm is the concentration limit applicable to several “trigger tasks” commonly associated with renovation and demolition activities such as torching, manual demolition, or using non-HEPA (high-efficiency particulate air) equipped tools or vacuums. Renovation or demolition of architectural or structural components coated with LBP or other lead-containing materials (e.g. glazed ceramic tiles) will require workers who are properly certified, trained, and employ proper work methods and protective equipment to minimize exposure to themselves and the surrounding environment.

Under the Cal-OSHA standard, the Permissible Exposure Limit (PEL) for lead is 50 micrograms per liter (ug/cm^3) on an 8-hour time-weighted average (TWA). Unless an acceptable Negative Exposure Assessment (NEA) has been completed, workers must wear respirators when the disturbance of LCMs or LBPs has the potential to exceed the PEL. Blood lead level (BLL) monitoring must be made available to workers exposed to airborne lead at or above the action level of $30 \text{ ug}/\text{cm}^3$. In addition, air monitoring for worker exposure must resume even if an NEA has been previously established, to confirm the results of the NEA. The contractor must also be aware that the Cal-OSHA Standard specifies the medical removal of workers whose BLL exceeds certain levels. A BLL of 50 micrograms per deciliter or greater requires that the worker be removed from the work area immediately.

Painted surfaces in areas not accessible, and which were not tested for LBP, cannot be presumed to be free of lead. Therefore, if renovation or demolition activities reveal paint types that were not sampled, additional LBP sampling would be required prior to activities that would disturb the painted surfaces unless those surfaces are presumed to be LBP.

The California Department of Health Services (DHS) and California Environmental Protection Agency (Cal EPA) Department of Toxic Substances Control (DTSC) oversee matters related to the renovation or demolition of materials coated with LBP and lead-containing materials on behalf of the Federal EPA. California Code of Regulations (CCR), Title 17 (Title 17) addresses the requirements of training, certification, and work practices of individuals associated with activities that are likely to disturb LBP or otherwise represent a lead hazard in residential or public buildings. It includes references and requirements related to activities likely to disturb lead-containing materials, and for clearance dust and soil sampling. Where applicable, inspection and work practices referenced in Title 17 generally specify or follow those in the HUD Guidelines.

CCR Title 22 specifies procedures for testing and other matters related to the disposal of wastes in California. These are in addition to those specified by the Federal EPA in the Resource Conservation and Recovery Act (RCRA). Chips of LBP and/or dust generated from the removal of lead-containing materials, when tested, are often classified as RCRA hazardous waste and need to be disposed of accordingly. In addition, due to recent changes in the application of law by the Cal-EPA, building materials coated with intact LBP are no longer exempt from hazardous waste testing, handling, and disposal requirements.

Representative samples of building materials that contain lead should be collected and analyzed to determine whether the material is a hazardous waste, and if so, what handling and disposal requirements are applicable. In general, properly sampled bulk building materials samples from demolition, when tested, will be classified as non-hazardous waste.

Other major regulations that may be pertinent include State Bill (SB) 460 which, among other things, prohibits the migration of lead-containing dust onto adjoining properties from any activity. This Bill allows for enforcement from any level of government including state, county, and/or municipal entities.

Appropriate respiratory protection must be used during any activity that could exceed the permissible exposure limit (PEL). Examples that are likely to exceed the PEL include activities such as the torch cutting of metal coated with lead-containing paint, or the breaking of ceramic materials coated with lead-containing glaze. Medical surveillance records, including blood lead results for samples collected within the past 12 months, should be provided for each worker that has the potential to be exposed to lead above the action level of 30 ug/cm³. These actions should be performed in accordance with local and state regulations.

Treated Wood Waste

Based on a comparison of analytical testing results to the hazardous waste thresholds listed by the State of California and RCRA, the TWW does not appear to be a RCRA hazardous waste. However, the TWW should be disposed of in accordance with the AMS described in CCR, Title 22, Division 4.5, Chapter 34, and all other Local, State, and Federal requirements for the proper waste loading, transportation, and disposal of TWW materials. Prior confirmation for disposal of TWW should be received from the solid waste facility before hauling.

It should be noted that available building plans show that the treated wood associated with the Timber Pier was installed more recently than the wood on the Access Pier. For this reason, the samples from the Access Pier are not considered representative of the submerged Timber Pier. The Timber Pier wood should be tested for chemical contaminants after removal but prior to disposal.

Other issues of potential environmental concern include the protection of the marine environment during demolition. This includes preventing debris from entering the water as

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the pier structure is disassembled. Floating booms surrounding the work area may provide additional protection.

We appreciate the opportunity to assist with this important project. Please feel free to contact Travis Stravasnik at (858) 217-5309 if you have any questions.

Sincerely,
Essentia Management Services, LLC



Travis L. Stravasnik
Certified Asbestos Consultant, CAC#07-4236



Thomas Zdeb
DHS Certified Lead Inspector #6882

Attachments:

- | | |
|--------------|---|
| Attachment 1 | Tables 1 through 8 |
| Attachment 2 | AmeriSci Laboratory Analytical Report and Chain-of-Custody Record |
| Attachment 3 | Cal Tech Laboratory Analytical Report and Chain-of-Custody Record |

ATTACHMENT 1

TABLES 1 THROUGH 8

Table 1 - Asbestos Survey Analytical Results

Sample No.	Sample Location	Sample Description	*Approx. Quantity (SF/LF/EA)	Friable Y/N	Asbestos Content
ASB-01	Valve on 4" pipe, east of pier	Insulation Blanket	N/A	N/A	NAD
ASB-02	4" pipe, east of pier	Pipe Insulation	N/A	N/A	NAD
ASB-03	4" pipe, east of pier	Pipe Insulation (thick), at Elbow	N/A	N/A	NAD
ASB-04	4" pipe, along east side of pier	Pipe Insulation	N/A	N/A	NAD
ASB-05	4" pipe, along east side of pier	12"-diameter Insulation Collar	50 EA	N	20% Chrysotile
ASB-06	4" pipe, along east side of pier	12"-diameter Insulation Collar	See ASB-05	N	15% Chrysotile
ASB-07	4" pipe, along east side of pier	12"-diameter Insulation Collar	See ASB-05	N	15% Chrysotile
ASB-08	4" pipe, along east side of pier	Pipe Insulation	N/A	N/A	NAD
ASB-09	4" pipe, along east side of pier	Pipe Insulation	N/A	N/A	NAD
ASB-10	4" pipe, along east side of pier	Pipe Insulation	N/A	N/A	NAD

NOTES:

EA = Each

SF = Square feet

LF = Linear feet

NAD = No asbestos detected

N/A = Not applicable

* = Material quantities are approximate. It is the contractors responsibility to confirm ACM quantities prior to bid submittals and initiating renovation or demolition activities.

** = Insulation blanket may become friable if not removed in intact condition.

Table 2 - Lead Survey Results - Readings with Detections Above 0.7 mg/cm²

Sample No.	Location	Feature	Substrate	Color	Lead Reading (mg/cm ²)	Notes
L1	Pier	Water Valve Body	Metal	Blue	0.8	--
L2	Pier	Water Valve Handle	Metal	Blue	1.0	--
L3	Pier	Water Valve "In" Line, 8" diameter	Metal	Blue	0.7	--
L7	Pier	Water Valve "In" Line, 10 to 12" diameter	Metal	Black	1.0	--
L8	Pier	Water Valve (Fire Line)	Metal	Red	7.2	--
L16	Pier	10" Pipe Coating	Fiberglass	Orange	1.1	--
L17	Pier	10" Pipe Coating	Fiberglass	Orange	1.5	--

Table 3 - Lead Survey Results - All Readings

Sample No.	Location	Feature	Substrate	Color	Lead Reading (mg/cm ²)	Notes
L1	Pier	Water Valve Body	Metal	Blue	0.8	--
L2	Pier	Water Valve Handle	Metal	Blue	1.0	--
L3	Pier	Water Valve "In" Line, 8" diameter	Metal	Blue	0.7	--
L4	Pier	Water Valve "Out" Line, 2" diameter	Metal	Blue	0.6	--
L5	Pier	Water Valve Body	Metal	Black	0.5	--
L6	Pier	Water Valve Handle	Metal	Black	0.6	--
L7	Pier	Water Valve "In" Line, 10" to 12" diameter	Metal	Black	1.0	--
L8	Pier	Water Valve (Fire Line)	Metal	Red	7.2	--
L9	Pier	Electrical Conduit, 1" diameter	Metal	Light Green	ND	--
L10	Pier	Electrical Conduit, 4" diameter	Metal	Light Green	ND	--
L11	Pier	Electrical Conduit, 4" diameter	Metal	Dark Green	ND	--
L12	Pier	Electrical Conduit, 4" diameter	Metal	Green	ND	--
L13	Pier	3" line	Metal	Green	0.3	--
L14	Pier	3" line	Metal	Green on Orange	0.5	--
L15	Pier	3" line	Metal	Green on Orange	0.3	--
L16	Pier	10" Pipe Coating	Fiberglass	Orange	1.1	--
L17	Pier	10" Pipe Coating	Fiberglass	Orange	1.5	--
L18	Beneath Pier	Water Line, 12" diameter	Metal	Black	ND	--
L19	Beneath Pier	Electrical Conduit, 4" diameter	Metal	Blue	ND	--
L20	Beneath Pier	Electrical Conduit, 4" diameter	Metal	Black	ND	--
L21	Pier	Light Standard (5" x 5")	Metal	Brown	ND	--
L22	Pier	Light Standard (5" x 5")	Metal	Brown	ND	--
L23	Pier	Light Standard (5" x 5")	Metal	Brown	ND	--
L24	Pier	Hand Rail - Top (2" x 6")	Wood	White	ND	--
L25	Pier	Hand Rail - Post (4" x 4")	Wood	White	ND	--
L26	Pier	Hand Rail - Support (2" x 4")	Wood	White	ND	--
L27	Pier	Deck (3" x 11")	Wood	No paint	ND	--
L28	Pier	Deck (3" x 11")	Wood	No paint	ND	--
L29	Pier	Deck - Main Support (4" x 14")	Wood	No paint	ND	--
L30	Pier	Deck - Main Support (4" x 14")	Wood	No paint	ND	--
L31	Pier	Deck - Main Support (4" x 14")	Wood	No paint	ND	--
L32	Pier	Hand Rail - Top (2" x 6")	Wood	White	ND	--
L33	Pier	Hand Rail - Post (4" x 4")	Wood	White	ND	--
L34	Pier	Hand Rail - Support	Wood	White	ND	--

Table 3 - Lead Survey Results - All Readings

Sample No.	Location	Feature	Substrate	Color	Lead Reading (mg/cm ²)	Notes
L35	Pier	Hand Rail - Top (2" x 6")	Wood	White	ND	--
L36	Pier	Hand Rail - Post (4" x 4")	Wood	White	ND	--
L37	Pier	Hand Rail - Support	Wood	White	ND	--

Table 4
Summary of Total Petroleum Hydrocarbons (TPH) in Treated Wood
EPA Method 8015M

Parameter	Sample I.D.		Units	SUPPORT BEAM 1 24-Mar-08	SUPPORT BEAM 2 24-Mar-08	SUPPORT BEAM 3 24-Mar-08	SUPPORT BEAM 4 1-Jul-08	SUPPORT BEAM 5 1-Jul-08
	DL	Sample Date						
EPA 8015M								
C5-C12	0.1	mg/kg	ND	ND	ND	ND	ND	ND
C13-C24	1	mg/kg	19,000	19,000	16,000	110,000	92,000	92,000
C25-C40	5	mg/kg	6,200	6,000	4,600	4,400	2,600	2,600
C5-C40 Total	---	mg/kg	25,200	25,000	20,600	114,400	94,600	94,600

Parameter	Sample I.D.		Units	DECK BOARD 1 24-Mar-08	DECK BOARD 2 24-Mar-08	DECK BOARD 3 24-Mar-08	HAND RAIL 1 24-Mar-08	HAND RAIL 2 24-Mar-08	HAND RAIL 3 24-Mar-08
	PQL	Sample Date							
EPA 8015M									
C5-C12	0.1	mg/kg	ND	ND	ND	ND	ND	ND	ND
C13-C24	1	mg/kg	12,000	11,000	16,000	4,200	7,400	2,400	2,400
C25-C40	5	mg/kg	11,000	8,400	13,000	2,400	3,000	880	880
C5-C40 Total	---	mg/kg	23,000	19,400	29,000	6,600	10,400	3,280	3,280

Notes:
mg/kg - milligrams per kilogram
DL - Detection limit

Table 5
Summary of Volatile Organic Compounds
(VOCs) in Treated Wood
EPA Method 8260B

Parameter	Sample I.D.		Units	Support Beam								Deck Board		Hand Rail 1A		Hand Rail 2A		Hand Rail 3A	
	PQL	Sample Date		1A	2A	3A	4	5	1A	2A	3A	2A	3A	2A	3A	2A	3A	2A	3A
EPA 8260B																			
Dichlorodifluoromethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl Alcohol	0.02	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	0.02	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	0.01	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.05	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert butyl ether (MtBE)	0.002	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diisopropyl ether (DIPE)	0.002	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	0.01	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis 1,2-Dichloroethene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl-t-butyl-ether (ETBE)	0.002	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.001	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl Ether (TAME)	0.002	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinylether	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MI)	0.01	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.001	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	0.01	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.005	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.001	mg/kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5
Summary of Volatile Organic Compounds
(VOCs) in Treated Wood
EPA Method 8260B

Parameter	Sample I.D.		Units	Support Beam																Deck Board		Hand Rail 1A		Hand Rail 2A		Hand Rail 3A	
	PQL	Sample Date		1A	2A	3A	4	5	1A	2A	3A	Support Beam	Deck Board	2A	3A	21-Mar-07	21-Mar-07	21-Mar-07	21-Mar-07								
EPA 8260B																											
m,p-Xylene	0.001	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Bromoforn	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Styrene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
o-Xylene	0.001	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,1,2,2-Tetrachloroethane	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,2,3-Trichloropropane	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Isopropylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Bromobenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
2-Chlorotoluene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
n-Propylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
4-Chlorotoluene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,3,5-Trimethylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Tert-butylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,2,4-Trimethylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Sec-butylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,3-Dichlorobenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,4-Dichlorobenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
p-Isopropyltoluene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,2-Dichlorobenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
n-Butylbenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,2-Dibromo-3-Chloropropane	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,2,4-Trichlorobenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Naphthalene	0.005	mg/kg	440	440	540	570	620	300	80	33	30	ND	ND	ND	ND	ND	ND	ND	ND	ND							
1,2,3-Trichlorobenzene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Hexachlorobutadiene	0.005	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							
Ethanol	0.1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND							

Notes:

mg/kg - milligrams per kilogram

PQL - Practical Quantitation Limit

Table 6
Summary of Semi-Volatile Organic Compounds (SVOCs) in Treated Wood
EPA Method 8270C

Parameter	Sample I.D.		SUPPORT BEAM 1 24-Mar-08	SUPPORT BEAM 2 24-Mar-08	SUPPORT BEAM 3 24-Mar-08	SUPPORT BEAM 4 1-Jul-08	SUPPORT BEAM 5 1-Jul-08	DECK BOARD 1 24-Mar-08	DECK BOARD 2 24-Mar-08	DECK BOARD 3 24-Mar-08	HAND RAIL 1 24-Mar-08	HAND RAIL 2 24-Mar-08	HAND RAIL 3 24-Mar-08
	PQL ¹	Units											
EPA 8270C													
Phenol	0.33	mg/kg	334	536	471	479	516	ND	ND	ND	ND	ND	ND
Bis(Chloroethyl) ether	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-methylphenol (o-cresol)	0.33	mg/kg	232	313	259	268	306	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl) ether	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methylphenol (p-cresol)	0.33	mg/kg	406	630	530	582	732	25	7	ND	ND	ND	ND
Hexachloroethane	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	0.33	mg/kg	ND	ND	ND	ND	ND	24	33	31	86	37	12
2-Nitrophenol	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.33	mg/kg	150 J	178	158 J	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	0.33	mg/kg	ND	ND	ND	143	182	ND	ND	ND	ND	ND	ND
Benzoic acid	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.33	mg/kg	8,160	8,390	8,330	17,400	24,400	25	30	61	27	77	ND
4-Chloroaniline	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.33	mg/kg	8,460	8,490	8,320	14,700	20,700	ND	25	48	12	82	157
Hexachlorocyclopentadiene	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	0.5	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	0.33	mg/kg	984	1,120	1,060	928	1,080	ND	ND	ND	ND	ND	6.2 J
2,6-Dinitrotoluene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 6
Summary of Semi-Volatile Organic Compounds (SVOCs) in Treated Wood
EPA Method 8270C

Parameter	Sample I.D.	Units	SUPPORT	SUPPORT	SUPPORT	SUPPORT	SUPPORT	DECK	DECK	DECK	HAND RAIL	HAND RAIL	HAND RAIL
	Sample Date		BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BOARD 1	BOARD 2	BOARD 3	1	2	3
			24-Mar-08	24-Mar-08	24-Mar-08	1-Jul-08	1-Jul-08	24-Mar-08	24-Mar-08	24-Mar-08	24-Mar-08	24-Mar-08	24-Mar-08
EPA 8270C	PQL ¹												
Acenaphthene	0.33	mg/kg	8,920	9,000	8,630	15,800	23,300	20	26	34	7.9 J	41	81
2,4-Dinitrophenol	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.33	mg/kg	7,070	7,330	6,990	10,200	15,100	16.4 J	18	19	6.2 J	27	59
4-Nitrophenol	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	0.33	mg/kg	8,610	9,000	8,680	12,400	19,200	19	19	20	5.7 J	25	40
Diethylphthalate	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-chlorophenyl phenyl ether	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Diphenylhydrazine	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	1.65	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.65	mg/kg	2,030	162	ND	ND	ND	20,600	8,900	21,700	6,500	9,560	2,180
Phenanthrene	0.33	mg/kg	42,900	33,800	31,600	31,600	49,900	112	104	63	20	60	45
Anthracene	0.33	mg/kg	7,010	7,320	7,450	9,540	15,600	ND	ND	ND	ND	ND	ND
Carbazole	0.33	mg/kg	4,560	5,060	5,100	4,050	5,050	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.33	mg/kg	25,800	20,400	19,200	16,900	25,800	75	43	29	8.4 J	14	5.4 J
Pyrene	0.33	mg/kg	19,300	14,300	14,300	11,600	18,500	54	28	20	5.7 J	8.3 J	ND
Butyl benzylphthalate	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.33	mg/kg	3,120	3,120	3,200	2,450	2,930	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	0.66	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.33	mg/kg	2,960	3,270	3,670	2,210	2,550	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) thalate	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	0.33	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.33	mg/kg	1,720	1,060	5,630	717	962	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.33	mg/kg	994	1,100	726	1,060	1,110	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.33	mg/kg	842	581	1,350	717	874	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd) pyrene	0.33	mg/kg	ND	ND	ND	236	205	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	mg/kg	ND	ND	ND	101	124	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	0.33	mg/kg	ND	ND	ND	171	160	ND	ND	ND	ND	ND	ND

Notes:
mg/kg - milligrams per kilogram
PQL - Practical quantitation limit
J - trace value

Table 7
Summary of Soluble Semi-Volatile Organic Compounds (SVOCs) in Treated Wood
Extraction by Toxicity Characteristic Leaching Procedure (TCLP)
Analyzed by EPA Method 8270C

Parameter		Sample I.D.		SUPPORT BEAM 1	DECK BOARD 1	DECK BOARD 2	DECK BOARD 3	HAND RAIL 1	HAND RAIL 2	HAND RAIL 3	
		Sample Date	MDL								Units
TCLP - EPA 8270C											
2-methylphenol (o-cresol)		100	ug/l	2,990	ND	ND	ND	ND	ND	ND	
m-cresol		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
4-methylphenol (p-cresol)		100	ug/l	6,290	198	1,060	490	135	145	ND	
1,4-Dichlorobenzene		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
2,4-Dinitrotoluene		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
Hexachlorobenzene		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
Hexachlorobutadiene		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
Hexachloroethane		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
Nitrobenzene		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
Pentachlorophenol		100	ug/l	ND	6,930	5,360	6,840	1,200	2,710	1,100	
Pyridine		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
2,4,5-Trichlorophenol		100	ug/l	ND	ND	ND	ND	ND	ND	ND	
2,4,6-Trichlorophenol		100	ug/l	ND	ND	ND	ND	ND	ND	ND	

Notes:

ug/l = micrograms per liter
MDL = Method detection limit

TABLE 8
SUMMARY OF METALS IN TREATED WOOD
EPA Method 6010B/7471

Metal Compound	Sample ID	SUPPORT BEAM 1	SUPPORT BEAM 2	SUPPORT BEAM 3	SUPPORT BEAM 4	SUPPORT BEAM 5	DECK BOARD 1
	Sample Date	24-Mar-08	24-Mar-08	24-Mar-08	1-Jul-08	1-Jul-08	24-Mar-08
	PQL (mg/kg)						
Antimony	2	ND	ND	ND	ND	ND	ND
Arsenic	2	ND	ND	ND	ND	ND	ND
Barium	0.5	ND	ND	ND	ND	ND	ND
Beryllium	1	ND	ND	ND	ND	ND	ND
Cadmium	1	ND	ND	ND	ND	ND	ND
Chromium	1	ND	ND	ND	ND	ND	ND
Cobalt	2	ND	ND	ND	ND	ND	ND
Copper	2	ND	ND	ND	ND	ND	ND
Lead	2	ND	ND	ND	ND	ND	ND
Mercury	0.05	ND	ND	ND	ND	ND	ND
Molybdenum	2	ND	ND	ND	ND	ND	ND
Nickel	2	ND	ND	ND	ND	ND	ND
Selenium	2	ND	ND	ND	ND	ND	ND
Silver	1	ND	ND	ND	ND	ND	ND
Thallium	2	ND	ND	ND	ND	ND	ND
Vanadium	2	ND	ND	ND	ND	ND	ND
Zinc	2	ND	ND	ND	ND	31	620

Notes:

DL = Limit of Detection

mg/kg = milligrams per kilogram

TABLE 8
SUMMARY OF METALS IN TREATED WOOD
EPA Method 6010B/7471

Metal Compound	Sample ID	DECK BOARD 2	DECK BOARD 3	HAND RAIL 1	HAND RAIL 2	HAND RAIL 3
	Sample Date	24-Mar-08	24-Mar-08	24-Mar-08	24-Mar-08	24-Mar-08
	PQL (mg/kg)					
Antimony	2	ND	ND	ND	ND	ND
Arsenic	2	ND	ND	ND	ND	ND
Barium	0.5	ND	ND	47	72	ND
Beryllium	1	ND	ND	ND	ND	ND
Cadmium	1	ND	ND	ND	ND	ND
Chromium	1	ND	ND	ND	ND	ND
Cobalt	2	ND	ND	ND	ND	ND
Copper	2	ND	ND	ND	ND	ND
Lead	2	ND	ND	ND	ND	ND
Mercury	0.05	ND	ND	ND	ND	ND
Molybdenum	2	ND	ND	ND	ND	ND
Nickel	2	ND	ND	ND	ND	ND
Selenium	2	ND	ND	ND	ND	ND
Silver	1	ND	ND	ND	ND	ND
Thallium	2	ND	ND	ND	ND	ND
Vanadium	2	ND	ND	ND	ND	ND
Zinc	2	1600	360	68	12	ND

Notes:

DL = Limit of Detection

mg/kg = milligrams per kilogram

ATTACHMENT 2

**AMERISCI LABORATORY ANALYTICAL REPORT AND
CHAIN-OF-CUSTODY RECORD**



AmeriSci Los Angeles

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April 2, 2008

Essentia Management Services LLC
Attn: Travis Stravasnik
12396 World Trade Dr.
Ste. 306
San Diego, CA 92128

RE: Essentia Management Services LLC
Job Number 908031521
P.O. #08-005-001
08-005-001; Navy Sonar Piers

Dear Travis Stravasnik:

Enclosed are the results for polarized light microscopy analysis (PLM) of the following Essentia Management Services LLC samples received at AmeriSci on Friday, March 28, 2008, for a 5 day turnaround:

ASB-01, ASB-02, ASB-03, ASB-04, ASB-05, ASB-06, ASB-07, ASB-08, ASB-09, ASB-10

The 10 samples contained in Ziplock Bags were shipped to AmeriSci via Federal Express. These samples were prepared and analyzed according to the EPA Interim Method (EPA 600/M4-82-020 per 40 CFR 763, subpt F, App. A). The samples were evaluated for homogeneity by low power stereomicroscopy. Asbestos fibers were identified by PLM and dispersion staining through the determination of the required optical properties including: morphology, color, pleochroism, refractive indices, birefringence, extinction and sign of elongation. The required analytical information, analysis results, analyst signature and laboratory identification is contained in the Analyst's Report.

This report relates ONLY to the sample analysis expressed as percent asbestos. The CV for this analysis is expected to range from 0.3 to 1.2, depending on the quantity of analyte present. AmeriSci assumes no responsibility for customer supplied data such as "sample type", "location", or "area sampled". This report must not be used to claim product endorsement by AmeriSci,

AmeriSci appreciates this opportunity to serve your organization. Please contact us for any further assistance or with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Mary S. David". The signature is fluid and cursive, with a large, looping "M" and "D".

Mary S. David
Client Services Manager

**AmeriSci Los Angeles**

24416 S. Main Street, Ste 308

Carson, California 90745

TEL: (310) 834-4868 • FAX: (310) 834-4772

PLM Bulk Asbestos Report

Essentia Management Services LLC

Attn: Travis Stravasnik

12396 World Trade Dr.

Ste. 306

San Diego, CA 92128

Date Received 03/28/08**Date Examined** 04/02/08**AmeriSci Job #** 908031521**P.O. #****Page** 1 **of** 3**RE:** 08-005-001; Navy Sonar Piers

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
ASB-01	908031521-01	No	NAD
Location: Insulation Blanket - 4" Pipe Valve			(by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Grey, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Fibrous glass 80 %, Non-fibrous 20 %			
ASB-02	908031521-02	No	NAD
Location: Pipe Insulation, East Of Pier			(by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Yellow, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Fibrous glass 80 %, Non-fibrous 20 %			
ASB-03	908031521-03	No	NAD
Location: Pipe Insulation Elbow, East Of Pier			(by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Beige, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Fibrous glass 25 %, Non-fibrous 75 %			
ASB-04	908031521-04	No	NAD
Location: Pipe Insulation, 4" Pipe Along Pier			(by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Beige, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Fibrous glass 25 %, Non-fibrous 75 %			
ASB-05	908031521-05	Yes	20 %
Location: 12" Collar On 4" Pipe Along Pier			(by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Grey, Heterogeneous, Fibrous, Cementitious, Bulk Material			
Asbestos Types: Chrysotile 20.0 %			
Other Material: Non-fibrous 80 %			

Client Name: Essentia Management Services LLC

PLM Bulk Asbestos Report

08-005-001; Navy Sonar Piers

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
ASB-06 Location: 12" Collar On 4" Pipe Along Pier	908031521-06	Yes	15 % (by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Grey, Heterogeneous, Fibrous, Cementitious, Bulk Material Asbestos Types: Chrysotile 15.0 % Other Material: Non-fibrous 85 %			
ASB-07 Location: Pipe Insulation, 4" Pipe Along Pier	908031521-07	Yes	15 % (by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Grey, Heterogeneous, Fibrous, Cementitious, Bulk Material Asbestos Types: Chrysotile 15.0 % Other Material: Non-fibrous 85 %			
ASB-08 Location: Pipe Insulation, 4" Pipe Along Pier	908031521-08	No	NAD (by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Beige, Heterogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 25 %, Non-fibrous 75 %			
ASB-09 Location: Pipe Insulation, 4" Pipe Along Pier	908031521-09	No	NAD (by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Beige, Heterogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 30 %, Non-fibrous 70 %			
ASB-10 Location: Pipe Insulation, 4" Pipe Along Pier	908031521-10	No	NAD (by CVES) by Raymundo Orozco on 04/02/08
Analyst Description: Beige, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Cellulose 5 %, Non-fibrous 95 %			

Client Name: Essentia Management Services LLC

PLM Bulk Asbestos Report

08-005-001; Navy Sonar Piers

Reporting Notes:

Analyzed By: Raymundo Orozco ; Date Analyzed: 4/2/2008 

*NAD = no asbestos detected; Detection Limit <1%; Reporting Limits: CVES = 1%, 400 Pt Ct = 0.25%, 1000 Pt Ct = 0.1%; NA = not analyzed; NAPS = not analyzed / positive stop; NVA = No Visible Asbestos; PLM (polarized light microscopy) Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #200346-0, CA ELAP lab #2322); Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar NOB materials. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). NIST Accreditation requirements mandate that this report must not be reproduced except in full with the approval of the laboratory. This PLM report relates ONLY to the items tested.

Reviewed By:  4/3/08



Asbestos Analysis Chain of Custody

AMERISCI LOS ANGELES
 24416 S Main St. Suite 308
 Carson, CA 90745
 Phone (310) 834-4868
 Fax (310) 834-4772

AMERISCI JOB #:

908031521

COMPANY: ESSENTIA		ADDRESS: 12396 WORLD TRADE DR, STE 306 SAN DIEGO, CA 92128		P.O.#:		
PROJECT INFORMATION		ANALYSIS TYPE		TURNAROUND TIME		
				RUSH	24 Hr	
				48 Hr	72 Hr	
				5 DAY	OTHER	
JOB NAME: NAVY SONAR PIERS		TEM AHERA				
JOB NUMBER: 08-005-001		TEM EPA LEVEL II				
JOB MANAGER: TRAVIS STRAVASNIK		TEM DUST MICROVAC				
JOB DESCRIPTION: —		TEM BULK				
		PCM				
		PLM BULK				
		PLM 1000 P. C.				
		OTHER:				
INITIAL RESULTS DELIVERY: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> VERBAL <input type="checkbox"/> MAIL ONLY		RETURN SAMPLES YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>				
REPORTS TO: TRAVIS STRAVASNIK		PHONE: 858-217-5309				
INVOICE TO: SAME		FAX: 858-217-5310				
COMMENTS: email: travis_stravasnik@essentia-llc.com		EMAIL:				
		PAGER/CELL: 858-354-5364				
SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME X	LITERS /MIN. = TOTAL VOLUME	DATE COLLECTED
ASB-01	INSULATION BLANKET- 4" PIPE VALVE	NA	NA	NA	NA	3/24/08
ASB-02	PIPE INSULATION, EAST OF PIER	↓	↓	↓	↓	↓
ASB-03	PIPE INSULATION ELBOW, EAST OF PIER					
ASB-04	PIPE INSULATION, 4" PIPE ALONG PIER					
ASB-05	12" COLLAR ON 4" PIPE ALONG PIER					
ASB-06	12" COLLAR ON 4" PIPE ALONG PIER					
ASB-07	12" COLLAR ON 4" PIPE ALONG PIER					
ASB-08	PIPE INSULATION, 4" PIPE ALONG PIER					
ASB-09	PIPE INSULATION, 4" PIPE ALONG PIER					
ASB-10	PIPE INSULATION, 4" PIPE ALONG PIER					
SAMPLED BY:						
RELINQUISHED BY:		DATE/TIME:		RECEIVED BY: 3/28/08 @ 0945		DATE/TIME:
RELINQUISHED BY:		DATE/TIME:		RECEIVED IN LAB BY:		DATE/TIME:

ATTACHMENT 3

**CAL TECH LABORATORY ANALYTICAL REPORT AND
CHAIN-OF-CUSTODY RECORD**

CAL TECH Environmental Laboratories



6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

ANALYTICAL RESULTS*

CTEL Project No: CT-0804034

Client Name: Essentia

12396 World Trade Dr. Suite 306

San Diego, CA 92128

Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307

Fax: (858) 217-5310

Project ID:

Project Name: Navy Sonar Pier, Nimitz Rd., Long Beach

Date Sampled: 03/24/08 @ 09:00 am

Date Received: 04/02/08 @ 14:00 p.m.

Date Analyzed: 04/04/08 – 04/11/08

Matrix: Solid

Laboratory ID:

0804-034-1

0804-034-2

0804-034-3

Method

Units

Detection

Client Sample ID:

Support B. 1

Support B. 2

Support B. 3

Limit

Title 22 Metals, Solid

Antimony (Sb)	ND	ND	ND	SW846 6010B	mg/Kg	2
Arsenic (As)	ND	ND	ND	SW846 6010B	mg/Kg	2
Barium (Ba)	ND	ND	ND	SW846 6010B	mg/Kg	0.5
Beryllium (Be)	ND	ND	ND	SW846 6010B	mg/Kg	1
Cadmium (Cd)	ND	ND	ND	SW846 6010B	mg/Kg	1
Chromium (Cr)	ND	ND	ND	SW846 6010B	mg/Kg	1
Cobalt (Co)	ND	ND	ND	SW846 6010B	mg/Kg	2
Copper (Cu)	ND	ND	ND	SW846 6010B	mg/Kg	2
Lead (Pb)	ND	ND	ND	SW846 6010B	mg/Kg	2
Mercury (Hg)	ND	ND	ND	SW846 7471	mg/Kg	0.05
Molybdenum (Mo)	ND	ND	ND	SW846 6010B	mg/Kg	2
Nickel (Ni)	ND	ND	ND	SW846 6010B	mg/Kg	2
Selenium (Se)	ND	ND	ND	SW846 6010B	mg/Kg	2
Silver (Ag)	ND	ND	ND	SW846 6010B	mg/Kg	1
Thallium (Tl)	ND	ND	ND	SW846 6010B	mg/Kg	2
Vanadium (V)	ND	ND	ND	SW846 6010B	mg/Kg	2
Zinc (Zn)	ND	ND	ND	SW846 6010B	mg/Kg	2

HCL, Extraction	04/02/08	04/02/08	04/02/08	SW846 3050	Date	
Carbon Chain (C5~C12)	ND	ND	ND	LUFT	mg/Kg	0.1
Carbon Chain (C13~C24)	19000	19000	16000	LUFT	mg/Kg	1
Carbon Chain (C25~C40)	6200	6000	4600	LUFT	mg/Kg	5

SVOC	See Attached	See Attached	See Attached	EPA 8270C	mg/Kg	
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ND = Not Detected at the indicated Detection Limit

TOTALLY DEDICATED TO CUSTOMER SATISFACTION

L31

CTEL Project No: CT-0804034
Client Name: Essentia
 12396 World Trade Dr. Suite 306
 San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier, Nimitz Rd., Long Beach

Date Sampled: 03/24/08 @ 09:15 am
Date Received: 04/02/08 @ 14:00 p.m.
Date Analyzed: 04/04/08 – 04/11/08

Matrix: Solid

Laboratory ID:	0804-034-4	0804-034-5	0804-034-6	Method	Units	Detection Limit
Client Sample ID:	Deck B. 1	Deck B. 2	Deck B. 3			

Title 22 Metals, Solid

Antimony (Sb)	ND	ND	ND	SW846 6010B	mg/Kg	2
Arsenic (As)	ND	ND	ND	SW846 6010B	mg/Kg	2
Barium (Ba)	ND	10	ND	SW846 6010B	mg/Kg	0.5
Beryllium (Be)	ND	ND	ND	SW846 6010B	mg/Kg	1
Cadmium (Cd)	ND	ND	ND	SW846 6010B	mg/Kg	1
Chromium (Cr)	ND	ND	ND	SW846 6010B	mg/Kg	1
Cobalt (Co)	ND	ND	ND	SW846 6010B	mg/Kg	2
Copper (Cu)	ND	ND	ND	SW846 6010B	mg/Kg	2
Lead (Pb)	ND	ND	ND	SW846 6010B	mg/Kg	2
Mercury (Hg)	ND	ND	ND	SW846 7471	mg/Kg	0.05
Molybdenum (Mo)	ND	ND	ND	SW846 6010B	mg/Kg	2
Nickel (Ni)	ND	ND	ND	SW846 6010B	mg/Kg	2
Selenium (Se)	ND	ND	ND	SW846 6010B	mg/Kg	2
Silver (Ag)	ND	ND	ND	SW846 6010B	mg/Kg	1
Thallium (Tl)	ND	ND	ND	SW846 6010B	mg/Kg	2
Vanadium (V)	ND	ND	ND	SW846 6010B	mg/Kg	2
Zinc (Zn)	620	1600	360	SW846 6010B	mg/Kg	2

HCL, Extraction	04/02/08	04/02/08	04/02/08	SW846 3050	Date
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Carbon Chain (C5~C12)	ND	ND	ND	LUFT	mg/Kg	0.1
Carbon Chain (C13~C24)	12000	11000	16000	LUFT	mg/Kg	1
Carbon Chain (C25~C40)	11000	8400	13000	LUFT	mg/Kg	5

SVOC	See Attached	See Attached	See Attached	EPA 8270C	mg/Kg
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ND = Not Detected at the indicated Detection Limit

CTEL Project No: CT-0804034

Client Name: Essentia

12396 World Trade Dr. Suite 306

San Diego, CA 92128

Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307

Fax: (858) 217-5310

Project ID:

Project Name: Navy Sonar Pier, Nimitz Rd., Long Beach

Date Sampled: 03/24/08 @ 09:35 am

Date Received: 04/02/08 @ 14:00 p.m.

Date Analyzed: 04/04/08 - 04/11/08

Matrix: Solid

Laboratory ID:

0804-034-7

0804-034-8

0804-034-9

Method

Units

Detection

Client Sample ID:

Hand Rail 1

Hand Rail 2

Hand Rail 3

Limit

Title 22 Metals, Solid

Antimony (Sb)	ND	ND	ND	SW846 6010B	mg/Kg	2
Arsenic (As)	ND	ND	ND	SW846 6010B	mg/Kg	2
Barium (Ba)	47	72	ND	SW846 6010B	mg/Kg	0.5
Beryllium (Be)	ND	ND	ND	SW846 6010B	mg/Kg	1
Cadmium (Cd)	ND	ND	ND	SW846 6010B	mg/Kg	1
Chromium (Cr)	ND	ND	ND	SW846 6010B	mg/Kg	1
Cobalt (Co)	ND	ND	ND	SW846 6010B	mg/Kg	2
Copper (Cu)	ND	ND	ND	SW846 6010B	mg/Kg	2
Lead (Pb)	ND	ND	ND	SW846 6010B	mg/Kg	2
Mercury (Hg)	ND	ND	ND	SW846 7471	mg/Kg	0.05
Molybdenum (Mo)	ND	ND	ND	SW846 6010B	mg/Kg	2
Nickel (Ni)	ND	ND	ND	SW846 6010B	mg/Kg	2
Selenium (Se)	ND	ND	ND	SW846 6010B	mg/Kg	2
Silver (Ag)	ND	ND	ND	SW846 6010B	mg/Kg	1
Thallium (Tl)	ND	ND	ND	SW846 6010B	mg/Kg	2
Vanadium (V)	ND	ND	ND	SW846 6010B	mg/Kg	2
Zinc (Zn)	68	12	ND	SW846 6010B	mg/Kg	2

HCL, Extraction 04/02/08 04/02/08 04/02/08 SW846 3050 Date

Carbon Chain (C5~C12)	ND	ND	ND	LUFT	mg/Kg	0.1
Carbon Chain (C13~C24)	4200	7400	2400	LUFT	mg/Kg	1
Carbon Chain (C25~C40)	2400	3000	880	LUFT	mg/Kg	5

SVOC See Attached See Attached See Attached EPA 8270C mg/Kg

ND = Not Detected at the indicated Detection Limit


Greg Tejirian
Laboratory Director

*The results are base upon the sample received.

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424



Alpha Scientific Corporation

Environmental Laboratories

Client: Cal Tech Environmental Laboratories Lab Job No.: CA804027 Date Reported: 04-08-2008
Project: 04-034 Matrix: Wood Date Sampled: 03-24-2008

EPA 8270C (Semi-VOCs by GC/MS, Page 1 of 2)
Reporting Unit: mg/kg (ppm)

DATE ANALYZED	04-04-08	04-04-08	04-04-08	04-04-08	04-04-08	04-04-08
DATE EXTRACTED	04-03-08	04-03-08	04-03-08	04-03-08	04-03-08	04-03-08
DILUTION FACTOR	1	500	500	500	50	25
LAB SAMPLE I.D.		CA804027-1	CA804027-2	CA804027-3	CA804027-4	CA804027-5
CLIENT SAMPLE I.D.		04-034-1	04-034-2	04-034-3	04-034-4	04-034-5
COMPOUND	MDL	MB				
Phenol	0.33	ND	334	536	471	ND
Bis(2-chloroethyl) ether	0.33	ND	ND	ND	ND	ND
2-Chlorophenol	0.33	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.33	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.33	ND	ND	ND	ND	ND
Benzyl alcohol	0.66	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.33	ND	ND	ND	ND	ND
2-Methylphenol (o-cresol)	0.33	ND	232	313	259	ND
Bis(2-chloroisopropyl)ether	0.33	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine	0.33	ND	ND	ND	ND	ND
4-Methylphenol (p-cresol)	0.33	ND	406	630	530	25
Hexachloroethane	0.33	ND	ND	ND	ND	ND
Nitrobenzene	0.33	ND	ND	ND	ND	ND
Isophorone	0.33	ND	ND	ND	ND	24
2-Nitrophenol	0.33	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.33	ND	150J	178	158J	ND
Bis(2-chloroethoxy)methane	0.33	ND	ND	ND	ND	ND
2,4-Dichlorophenol	0.33	ND	ND	ND	ND	ND
Benzoic acid	1.65	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.33	ND	ND	ND	ND	ND
Naphthalene	0.33	ND	8,160	8,390	8,330	25
4-Chloroaniline	0.66	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.33	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	0.66	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.33	ND	8,460	8,490	8,320	ND
Hexachlorocyclopentadiene	0.66	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	0.33	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	0.5	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.33	ND	ND	ND	ND	ND
2-Nitroaniline	1.65	ND	ND	ND	ND	ND
Dimethylphthalate	0.33	ND	ND	ND	ND	ND
Acenaphthylene	0.33	ND	984	1,120	1,060	ND
2,6-Dinitrotoluene	0.33	ND	ND	ND	ND	ND

*: Obtained from a higher dilution analysis. J :Trace value.



Alpha Scientific Corporation
Environmental Laboratories

Client: Cal Tech Environmental Laboratories Lab Job No.: CA804027 Date Reported: 04-08-2008
Project: 04-034 Matrix: Wood Date Sampled: 03-24-2008

EPA 8270C (Semi-VOCs by GC/MS, Page 2 of 2)
Reporting Unit: mg/kg(ppm)

COMPOUND	MDL	MB	04-034-1	04-034-2	04-034-3	04-034-4	04-034-5
3-Nitroaniline	1.65	ND	ND	ND	ND	ND	ND
Acenaphthene	0.33	ND	8,920	9,000	8,630	20	25.9
2,4-Dinitrophenol	1.65	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.33	ND	7,070	7,330	6,990	16.4 J	17.5
4-Nitrophenol	1.65	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.33	ND	ND	ND	ND	ND	ND
Fluorene	0.33	ND	8,610	9,000	8,680	19	18.5
Diethylphthalate	0.33	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	0.33	ND	ND	ND	ND	ND	ND
4-Nitroaniline	1.65	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.33	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	1.65	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.33	ND	ND	ND	ND	ND	ND
4-Bromophenyl- phenyl ether	0.33	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.33	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.65	ND	2,030	162	ND	20,600*	8,900*
Phenanthrene	0.33	ND	42,900*	33,800*	31,600*	112	104
Anthracene	0.33	ND	7,010	7,320	7,450	ND	ND
Carbazole	0.33	ND	4,560	5,060	5,100	ND	ND
Di-n-butylphthalate	0.33	ND	ND	ND	ND	ND	ND
Fluoranthene	0.33	ND	25,800*	20,400*	19,200*	75	42.7
Pyrene	0.33	ND	19,300*	14,300*	14,300*	53.8	27.5
Butyl benzylphthalate	0.33	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.33	ND	3,120	3,120	3,200	ND	ND
3,3'-Dichlorobenzidine	0.66	ND	ND	ND	ND	ND	ND
Chrysene	0.33	ND	2,960	3,270	3,670	ND	ND
Bis(2-Ethylhexyl)phthalate	0.33	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	0.33	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.33	ND	1,720	1,060	5,630	ND	ND
Benzo(k)fluoranthene	0.33	ND	994	1,100	726	ND	ND
Benzo(a)pyrene	0.33	ND	842	581	1,350	ND	ND
Indeno(1,2,3-cd)pyrene	0.33	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.33	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	0.33	ND	ND	ND	ND	ND	ND

*: Obtained from a higher dilution analysis. J: Trace value.

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below MDL).



Alpha Scientific Corporation

Environmental Laboratories

Client: Cal Tech Environmental Laboratories
Project: 04-034

Lab Job No.: CA804027
Matrix: Wood

Date Reported: 04-08-2008
Date Sampled: 03-24-2008

EPA 8270C (Semi-VOCs by GC/MS, Page 1 of 2)
Reporting Unit: mg/kg (ppm)

DATE ANALYZED	04-04-08	04-04-08	04-04-08	04-04-08	04-04-08	
DATE EXTRACTED	04-03-08	04-03-08	04-03-08	04-03-08	04-03-08	
DILUTION FACTOR	1	25	30	30	30	
LAB SAMPLE I.D.		CA804027-6	CA804027-7	CA804027-8	CA804027-9	
CLIENT SAMPLE I.D.		04-034-6	04-034-7	04-034-8	04-034-9	
COMPOUND	MDL	MB				
Phenol	0.33	ND	ND	ND	ND	
Bis(2-chloroethyl) ether	0.33	ND	ND	ND	ND	
2-Chlorophenol	0.33	ND	ND	ND	ND	
1,3-Dichlorobenzene	0.33	ND	ND	ND	ND	
1,4-Dichlorobenzene	0.33	ND	ND	ND	ND	
Benzyl alcohol	0.66	ND	ND	ND	ND	
1,2-Dichlorobenzene	0.33	ND	ND	ND	ND	
2-Methylphenol (o-cresol)	0.33	ND	ND	ND	ND	
Bis(2-chloroisopropyl)ether	0.33	ND	ND	ND	ND	
N-Nitrosodi-n-propylamine	0.33	ND	ND	ND	ND	
4-Methylphenol (p-cresol)	0.33	ND	ND	ND	ND	
Hexachloroethane	0.33	ND	ND	ND	ND	
Nitrobenzene	0.33	ND	ND	ND	ND	
Isophorone	0.33	ND	31	85.5	36.8	11.7
2-Nitrophenol	0.33	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.33	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	0.33	ND	ND	ND	ND	ND
2,4-Dichlorophenol	0.33	ND	ND	ND	ND	ND
Benzoic acid	1.65	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.33	ND	ND	ND	ND	ND
Naphthalene	0.33	ND	61	26.9	77.1	ND
4-Chloroaniline	0.66	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.33	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	0.66	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.33	ND	48	11.9	82.2	157
Hexachlorocyclopentadiene	0.66	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	0.33	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	0.5	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.33	ND	ND	ND	ND	ND
2-Nitroaniline	1.65	ND	ND	ND	ND	ND
Dimethylphthalate	0.33	ND	ND	ND	ND	ND
Acenaphthylene	0.33	ND	ND	ND	ND	6.2J
2,6-Dinitrotoluene	0.33	ND	ND	ND	ND	ND

*: Obtained from a higher dilution analysis. J :Trace value.



Alpha Scientific Corporation
Environmental Laboratories

Client: Cal Tech Environmental Laboratories Lab Job No.: CA804027 Date Reported: 04-08-2008
Project: 04-034 Matrix: Wood Date Sampled: 03-24-2008

EPA 8270C (Semi-VOCs by GC/MS, Page 2 of 2)
Reporting Unit: mg/kg(ppm)

COMPOUND	MDL	MB	04-034-6	04-034-7	04-034-8	04-034-9	
3-Nitroaniline	1.65	ND	ND	ND	ND	ND	
Acenaphthene	0.33	ND	34	7.9J	41	81.2	
2,4-Dinitrophenol	1.65	ND	ND	ND	ND	ND	
Dibenzofuran	0.33	ND	19	6.2J	27	59	
4-Nitrophenol	1.65	ND	ND	ND	ND	ND	
2,4-Dinitrotoluene	0.33	ND	ND	ND	ND	ND	
Fluorene	0.33	ND	20	5.7J	25	40	
Diethylphthalate	0.33	ND	ND	ND	ND	ND	
4-Chlorophenyl phenyl ether	0.33	ND	ND	ND	ND	ND	
4-Nitroaniline	1.65	ND	ND	ND	ND	ND	
1,2-Diphenylhydrazine	0.33	ND	ND	ND	ND	ND	
4,6-Dinitro-2-methylphenol	1.65	ND	ND	ND	ND	ND	
N-Nitrosodiphenylamine	0.33	ND	ND	ND	ND	ND	
4-Bromophenyl- phenyl ether	0.33	ND	ND	ND	ND	ND	
Hexachlorobenzene	0.33	ND	ND	ND	ND	ND	
Pentachlorophenol	1.65	ND	21,700*	6,500*	9,560*	2,180*	
Phenanthrene	0.33	ND	63	20	60	45	
Anthracene	0.33	ND	ND	ND	ND	ND	
Carbazole	0.33	ND	ND	ND	ND	ND	
Di-n-butylphthalate	0.33	ND	ND	ND	ND	ND	
Fluoranthene	0.33	ND	29	8.4J	14	5.4J	
Pyrene	0.33	ND	20	5.7J	8.3J	ND	
Butyl benzylphthalate	0.33	ND	ND	ND	ND	ND	
Benzo(a)anthracene	0.33	ND	ND	ND	ND	ND	
3,3'-Dichlorobenzidine	0.66	ND	ND	ND	ND	ND	
Chrysene	0.33	ND	ND	ND	ND	ND	
Bis(2-Ethylhexyl)phthalate	0.33	ND	ND	ND	ND	ND	
Di-n-octylphthalate	0.33	ND	ND	ND	ND	ND	
Benzo(b)fluoranthene	0.33	ND	ND	ND	ND	ND	
Benzo(k)fluoranthene	0.33	ND	ND	ND	ND	ND	
Benzo(a)pyrene	0.33	ND	ND	ND	ND	ND	
Indeno(1,2,3-cd)pyrene	0.33	ND	ND	ND	ND	ND	
Dibenz(a,h)anthracene	0.33	ND	ND	ND	ND	ND	
Benzo(g,h,i)perylene	0.33	ND	ND	ND	ND	ND	

*: Obtained from a higher dilution analysis. J: Trace value.

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below MDL).

CAL TECH Environmental Laboratories

6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

Client: ESSENTIA MANAGEMENT SERVICES LLC

Contact: TRAVIS STRAVASNIK

Address: 12396 WORLD TRADE DR. STE 306

SAN DIEGO, CA 92128

Project: NAVY SONAR PIER, NIMITZ RD, LONG BEACH, CA

Sampled By: TRAVIS STRAVASNIK
Name/Signature

Phone: 858-211-5309

Fax: 858-211-5310

Turn Around Time

Rush

Normal

X

Chain of Custody Record

Analyses Requested

Lab ID Number	Field ID	Date/Time Sampled	Bottle Type	No.	Preserv.	Matrix	Comments
	SUPPORT BEAM 1	3/24/08 9:00	METAL CAN	1	NONE	WOOD CHIP	HAND FOR INSTRUCTIONS
	SUPPORT BEAM 2	9:05					
	SUPPORT BEAM 3	9:10					
	DECK BOARD 1	9:15					
	DECK BOARD 2	9:20					
	DECK BOARD 3	9:25					
	HAND RAIL 1	9:35					
	HAND RAIL 2	9:45					
	HAND RAIL 3	9:55					

L38

Relinquished:

Dispatched:

Travis (FEN-EX)

Date / Time: 3/31/08 5 p.m.

Date / Time:

Received:

Carrier:

I hereby authorize the performance of the above indicated tests.

Date / Time: 2/2/08 2:00

Custody seal(s) in tact upon receipt by lab?

YES

NO

NONE

Received by lab: GLP 17

CAL TECH Environmental Laboratories



6814 Rosecrans Avenue. Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

ANALYTICAL RESULTS*

CTEL Project No: CT-0807041

Client Name: Essentia
12396 World Trade Dr. Suite 306
San Diego, CA 92128

Phone: (858) 217-5307

Fax: (858) 217-5310

Attention: Mr. Travis Stravasnik

Project ID:

Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am

Matrix: Solid

Date Received: 07/03/08 @ 11:00 am

Date Analyzed: 07/08/08 – 07/09/08

Laboratory ID:

0807-041-1

0807-041-2

0807-041-3

Method

Units:

Detection

Client Sample ID:

Support B. 1A

Support B. 2A

Support B. 3A

Limit

Dilution

1000

1000

1000

Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	mg/Kg	0.020
Methylene Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Cis, 1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005

CTEL Project No: CT-0807041

Project ID:

Project Name: Navy Sonar Pier

Laboratory ID: Client Sample ID:	0807-041-1 Support B. 1A	0807-041-2 Support B. 2A	0807-041-3 Support B. 3A	Method	Units	Detection Limit
1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
m,p-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
Bromoform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Tert-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Sec-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	440	440	540	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethanol	ND	ND	ND	EPA 8260B	mg/Kg	0.1

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	85	81	87	70-130
1,2 Dichloromethaned4	96	84	98	70-130
Toluene-d8	89	89	89	70-130
Bromofluorobenzene	106	102	102	70-130

CTEL Project No: CT-0807041

Client Name: Essentia

12396 World Trade Dr. Suite 306
San Diego, CA 92128

Phone: (858) 217-5307

Fax: (858) 217-5310

Attention: Mr. Travis Stravasnik

Project ID:

Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am

Date Received: 07/03/08 @ 11:00 am

Date Analyzed: 07/08/08 – 07/09/08

Matrix: Solid

Laboratory ID:	0807-041-4	0807-041-5	0807-041-6	Method	Units:	Detection Limit
Client Sample ID:	Support B. 4	Support B. 5	Deck B. 1A			
Dilution	1000	1000	1000			
Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	mg/Kg	0.020
Methylene Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Cis, 1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005

CTEL Project No: CT-0807041

Project ID:

Project Name: Navy Sonar Pier

Laboratory ID:	0807-041-4	0807-041-5	0807-041-6	Method	Units	Detection Limit
Client Sample ID:	Support B. 4	Support B. 5	Deck B. 1A			
1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
m,p-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
Bromoform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Tert-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Sec-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	570	620	300	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethanol	ND	ND	ND	EPA 8260B	mg/Kg	0.1
Carbon Chain (C5~C12)	ND	ND		LUFT	mg/Kg	0.1
Carbon Chain (C13~C24)	110000	92000		LUFT	mg/Kg	1
Carbon Chain (C25~C40)	4400	2600		LUFT	mg/Kg	5
SVOC	See Attached	See Attached		EPA 8270C	mg/Kg	

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	86	84	84	70-130
1,2 Dichloromethaned4	100	97	98	70-130
Toluene-d8	89	89	88	70-130
Bromofluorobenzene	104	101	101	70-130

CTEL Project No: CT-0807041
Client Name: Essentia
 12396 World Trade Dr. Suite 306
 San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am
Date Received: 07/03/08 @ 11:00 am
Date Analyzed: 07/08/08 – 07/09/08

Matrix: Solid

Laboratory ID:	0807-041-7	0807-041-8	0807-041-9	Method	Units:	Detection Limit
Client Sample ID:	Deck B. 2A	Deck B. 3A	Hand Rail 1A			
Dilution	1000	1000	1000			
Dichlorodifluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	ND	EPA 8260B	mg/Kg	0.020
Methylene Chloride	ND	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trans,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
Methyl Ethyl Ketone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Cis,1,2-Dichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,1,1-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
t-Amyl Methyl Ether (TAME)	ND	ND	ND	EPA 8260B	mg/Kg	0.002
1,2-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Cis, 1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Trans,1,3-Dichloropropene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2-Trichloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005

CTEL Project No: CT-0807041

Project ID:

Project Name: Navy Sonar Pier

Laboratory ID:

0807-041-7

0807-041-8

0807-041-9

Method

Units

Detection

Client Sample ID:

Deck B. 2A

Deck B. 3A

Hand Rail 1A

Limit

1,2-Dibromoethane(EDB)	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
m,p-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
Bromoform	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2,2-Tetrachloroethane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Tert-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Sec-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	80	33	30	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	ND	EPA 8260B	mg/Kg	0.005
Ethanol	ND	ND	ND	EPA 8260B	mg/Kg	0.1

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY			Control Limit
Dibromofluoromethane	86	79	86	70-130
1,2 Dichloromethaned4	98	103	87	70-130
Toluene-d8	90	88	88	70-130
Bromofluorobenzene	103	106	109	70-130

CTEL Project No: CT-0807041
Client Name: Essentia
 12396 World Trade Dr. Suite 306
 San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am
Date Received: 07/03/08 @ 11:00 am
Date Analyzed: 07/08/08 – 07/09/08

Matrix: Solid

Laboratory ID:	0807-041-10	0807-041-11	Method	Units:	Detection Limit
Client Sample ID:	Hand Rail 2A	Hand Rail 3A			
Dilution	100	100			
Dichlorodifluoromethane	ND	ND	EPA 8260B	mg/Kg	0.005
Chloromethane	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl Chloride	ND	ND	EPA 8260B	mg/Kg	0.005
Bromomethane	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroethane	ND	ND	EPA 8260B	mg/Kg	0.005
Trichlorofluoromethane	ND	ND	EPA 8260B	mg/Kg	0.005
Iodomethane	ND	ND	EPA 8260B	mg/Kg	0.005
Acetone	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloroethene	ND	ND	EPA 8260B	mg/Kg	0.005
t-Butyl Alcohol (TBA)	ND	ND	EPA 8260B	mg/Kg	0.020
Methylene Chloride	ND	ND	EPA 8260B	mg/Kg	0.02
Freon 113	ND	ND	EPA 8260B	mg/Kg	0.01
Carbon disulfide	ND	ND	EPA 8260B	mg/Kg	0.005
Trans,1,2-Dichloroethene	ND	ND	EPA 8260B	mg/Kg	0.005
Methyl-tert-butyl-ether(MtBE)	ND	ND	EPA 8260B	mg/Kg	0.002
1,1-Dichloroethane	ND	ND	EPA 8260B	mg/Kg	0.005
Vinyl acetate	ND	ND	EPA 8260B	mg/Kg	0.005
Diisopropyl Ether (DIPE)	ND	ND	EPA 8260B	mg/Kg	0.002
Methyl Ethyl Ketone	ND	ND	EPA 8260B	mg/Kg	0.01
Cis,1,2-Dichloroethene	ND	ND	EPA 8260B	mg/Kg	0.005
Bromochloromethane	ND	ND	EPA 8260B	mg/Kg	0.005
Chloroform	ND	ND	EPA 8260B	mg/Kg	0.005
2,2-Dichloropropane	ND	ND	EPA 8260B	mg/Kg	0.005
Ethyl-t-butyl ether (ETBE)	ND	ND	EPA 8260B	mg/Kg	0.002
1,1,1-Trichloroethane	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichloroethane	ND	ND	EPA 8260B	mg/Kg	0.005
1,1-Dichloropropene	ND	ND	EPA 8260B	mg/Kg	0.005
Carbon Tetrachloride	ND	ND	EPA 8260B	mg/Kg	0.005
Benzene	ND	ND	EPA 8260B	mg/Kg	0.001
t-Amyl Methyl Ether (TAME)	ND	ND	EPA 8260B	mg/Kg	0.002
1,2-Dichloropropane	ND	ND	EPA 8260B	mg/Kg	0.005
Trichloroethene	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromomethane	ND	ND	EPA 8260B	mg/Kg	0.005
Bromodichloromethane	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chloroethylvinylether	ND	ND	EPA 8260B	mg/Kg	0.005
Cis, 1,3-Dichloropropene	ND	ND	EPA 8260B	mg/Kg	0.005
4-Methyl-2-pentanone(MI)	ND	ND	EPA 8260B	mg/Kg	0.01
Trans,1,3-Dichloropropene	ND	ND	EPA 8260B	mg/Kg	0.005
Toluene	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2-Trichloroethane	ND	ND	EPA 8260B	mg/Kg	0.005

CTEL Project No: CT-0807041

Project ID:

Project Name: Navy Sonar Pier

Laboratory ID:	0807-041-10	0807-041-11	Method	Units	Detection Limit
Client Sample ID:	Hand Rail 2A	Hand Rail 3A			
1,2-Dibromoethane(EDB)	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichloropropane	ND	ND	EPA 8260B	mg/Kg	0.005
Dibromochloromethane	ND	ND	EPA 8260B	mg/Kg	0.005
2-Hexanone	ND	ND	EPA 8260B	mg/Kg	0.01
Tetrachloroethene	ND	ND	EPA 8260B	mg/Kg	0.005
Chlorobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
1,1,1,2-Tetrachloroethane	ND	ND	EPA 8260B	mg/Kg	0.005
Ethylbenzene	ND	ND	EPA 8260B	mg/Kg	0.001
m,p-Xylene	ND	ND	EPA 8260B	mg/Kg	0.001
Bromoform	ND	ND	EPA 8260B	mg/Kg	0.005
Styrene	ND	ND	EPA 8260B	mg/Kg	0.005
o-Xylene	ND	ND	EPA 8260B	mg/Kg	0.001
1,1,2,2-Tetrachloroethane	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichloropropane	ND	ND	EPA 8260B	mg/Kg	0.005
Isopropylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
Bromobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
2-Chlorotoluene	ND	ND	EPA 8260B	mg/Kg	0.005
n-Propylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
4-Chlorotoluene	ND	ND	EPA 8260B	mg/Kg	0.005
1,3,5-Trimethylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
Tert-Butylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trimethylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
Sec-Butylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
1,3-Dichlorobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
1,4-Dichlorobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
p-Isopropyltoluene	ND	ND	EPA 8260B	mg/Kg	0.005
1,2-Dichlorobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
n-Butylbenzene	ND	ND	EPA 8260B	mg/Kg	0.005
1,2 Dibromo-3-Chloropropane	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,4-Trichlorobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
Naphthalene	ND	ND	EPA 8260B	mg/Kg	0.005
1,2,3-Trichlorobenzene	ND	ND	EPA 8260B	mg/Kg	0.005
Hexachlorobutadiene	ND	ND	EPA 8260B	mg/Kg	0.005
Ethanol	ND	ND	EPA 8260B	mg/Kg	0.1

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE	% SURROGATE RECOVERY		Control Limit
Dibromofluoromethane	80	84	70-130
1,2 Dichloromethaned4	92	98	70-130
Toluene-d8	87	88	70-130
Bromofluorobenzene	105	109	70-130

CTEL Project No: CT-0807041
Client Name: Essentia
12396 World Trade Dr. Suite 306
San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am
Date Received: 07/03/08 @ 11:00 am
Date Analyzed: 07/08/08

Matrix: Solid


Laboratory ID:	0807-041-4	0807-041-5	Method	Units	Detection Limit
Client Sample ID:	Support B. 4	Support B. 5			

Title 22 Metals, Solid

Antimony (Sb)	ND	ND	SW846 6010B	mg/Kg	2
Arsenic (As)	ND	ND	SW846 6010B	mg/Kg	2
Barium (Ba)	ND	ND	SW846 6010B	mg/Kg	0.5
Beryllium (Be)	ND	ND	SW846 6010B	mg/Kg	1
Cadmium (Cd)	ND	ND	SW846 6010B	mg/Kg	1
Chromium (Cr)	ND	ND	SW846 6010B	mg/Kg	1
Cobalt (Co)	ND	ND	SW846 6010B	mg/Kg	2
Copper (Cu)	ND	ND	SW846 6010B	mg/Kg	2
Lead (Pb)	ND	ND	SW846 6010B	mg/Kg	2
Mercury (Hg)	ND	ND	SW846 7471	mg/Kg	0.05
Molybdenum (Mo)	ND	ND	SW846 6010B	mg/Kg	2
Nickel (Ni)	ND	ND	SW846 6010B	mg/Kg	2
Selenium (Se)	ND	ND	SW846 6010B	mg/Kg	2
Silver (Ag)	ND	ND	SW846 6010B	mg/Kg	1
Thallium (Tl)	ND	ND	SW846 6010B	mg/Kg	2
Vanadium (V)	ND	ND	SW846 6010B	mg/Kg	2
Zinc (Zn)	ND	31	SW846 6010B	mg/Kg	2

HCL, Extraction	07/02/08	07/02/08	SW846 3050	Date
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ND = Not Detected at the indicated Detection Limit


Greg Tejirian
Laboratory Director

*The results are base upon the sample received.



Alpha Scientific Corporation
Environmental Laboratories

Client: Cal Tech Environmental Laboratories
Project: 07-041

Lab Job No.: CA807042
Matrix: Wood

Date Reported: 07-14-2008
Date Sampled: 07-01-2008

EPA 8270C (Semi-VOCs by GC/MS, Page 1 of 2)
Reporting Unit: mg/kg (ppm)

DATE ANALYZED		07-10-08	07-10-08	07-10-08			
DATE EXTRACTED		07-09-08	07-09-08	07-09-08			
DILUTION FACTOR		1	100	100			
LAB SAMPLE I.D.			CA807042-1	CA807042-2			
CLIENT SAMPLE I.D.			07.041-4	07.041-5			
COMPOUND	MDL	MB					
Phenol	0.33	ND	479	516			
Bis(2-chloroethyl) ether	0.33	ND	ND	ND			
2-Chlorophenol	0.33	ND	ND	ND			
1,3-Dichlorobenzene	0.33	ND	ND	ND			
1,4-Dichlorobenzene	0.33	ND	ND	ND			
Benzyl alcohol	0.66	ND	ND	ND			
1,2-Dichlorobenzene	0.33	ND	ND	ND			
2-Methylphenol (o-cresol)	0.33	ND	268	306			
Bis(2-chloroisopropyl)ether	0.33	ND	ND	ND			
N-Nitrosodi-n-propylamine	0.33	ND	ND	ND			
4-Methylphenol (p-cresol)	0.33	ND	582	732			
Hexachloroethane	0.33	ND	ND	ND			
Nitrobenzene	0.33	ND	ND	ND			
Isophorone	0.33	ND	ND	ND			
2-Nitrophenol	0.33	ND	ND	ND			
2,4-Dimethylphenol	0.33	ND	ND	ND			
Bis(2-chloroethoxy)methane	0.33	ND	ND	ND			
2,4-Dichlorophenol	0.33	ND	143	182			
Benzoic acid	1.65	ND	ND	ND			
1,2,4-Trichlorobenzene	0.33	ND	ND	ND			
Naphthalene	0.33	ND	17,400*	24,400*			
4-Chloroaniline	0.66	ND	ND	ND			
Hexachlorobutadiene	0.33	ND	ND	ND			
4-Chloro-3-methylphenol	0.66	ND	ND	ND			
2-Methylnaphthalene	0.33	ND	14,700*	20,700*			
Hexachlorocyclopentadiene	0.66	ND	ND	ND			
2,4,6-Trichlorophenol	0.33	ND	ND	ND			
2,4,5-Trichlorophenol	0.5	ND	ND	ND			
2-Chloronaphthalene	0.33	ND	ND	ND			
2-Nitroaniline	1.65	ND	ND	ND			
Dimethylphthalate	0.33	ND	ND	ND			
Acenaphthylene	0.33	ND	928	1,080			
2,6-Dinitrotoluene	0.33	ND	ND	ND			

* : Obtained from a higher dilution analysis. J : Trace value.



Alpha Scientific Corporation
Environmental Laboratories

Client: Cal Tech Environmental Laboratories
Project: 07-041

Lab Job No.: CA807042
Matrix: Wood

Date Reported: 07-14-2008
Date Sampled: 07-01-2008

EPA 8270C (Semi-VOCs by GC/MS, Page 2 of 2)
Reporting Unit: mg/kg(ppm)

COMPOUND	MDL	MB	07.041-4	07.041-5			
3-Nitroaniline	1.65	ND	ND	ND			
Acenaphthene	0.33	ND	15,800*	23,300*			
2,4-Dinitrophenol	1.65	ND	ND	ND			
Dibenzofuran	0.33	ND	10,200*	15,100*			
4-Nitrophenol	1.65	ND	ND	ND			
2,4-Dinitrotoluene	0.33	ND	ND	ND			
Fluorene	0.33	ND	12,400*	19,200*			
Diethylphthalate	0.33	ND	ND	ND			
4-Chlorophenyl phenyl ether	0.33	ND	ND	ND			
4-Nitroaniline	1.65	ND	ND	ND			
1,2-Diphenylhydrazine	0.33	ND	ND	ND			
4,6-Dinitro-2-methylphenol	1.65	ND	ND	ND			
N-Nitrosodiphenylamine	0.33	ND	ND	ND			
4-Bromophenyl- phenyl ether	0.33	ND	ND	ND			
Hexachlorobenzene	0.33	ND	ND	ND			
Pentachlorophenol	1.65	ND	ND	ND			
Phenanthrene	0.33	ND	31,600*	49,900*			
Anthracene	0.33	ND	9,540*	15,600*			
Carbazole	0.33	ND	4,050	5,050			
Di-n-butylphthalate	0.33	ND	ND	ND			
Fluoranthene	0.33	ND	16,900*	25,800*			
Pyrene	0.33	ND	11,600*	18,500*			
Butyl benzylphthalate	0.33	ND	ND	ND			
Benzo(a)anthracene	0.33	ND	2,450	2,930			
3,3'-Dichlorobenzidine	0.66	ND	ND	ND			
Chrysene	0.33	ND	2,210	2,550			
Bis(2-Ethylhexyl)phthalate	0.33	ND	ND	ND			
Di-n-octylphthalate	0.33	ND	ND	ND			
Benzo(b)fluoranthene	0.33	ND	717	962			
Benzo(k)fluoranthene	0.33	ND	1,060	1,110			
Benzo(a)pyrene	0.33	ND	717	874			
Indeno(1,2,3-cd)pyrene	0.33	ND	236	205			
Dibenz(a,h)anthracene	0.33	ND	101	124			
Benzo(g,h,i)perylene	0.33	ND	171	160			

*: Obtained from a higher dilution analysis. J: Trace value.

MB=Method Blank; MDL=Method Detection Limit; ND=Not Detected (below MDL).

CAL TECH Environmental Laboratories

6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789



Page 1 of 1

Lab Job No. 07-041

JUL-02-2008 12:50

Chain of Custody Record

Client: ESSENTIA
Contact: TRAVIS STRAVASME
Address: 12396 WOODBINE DR., STE 306
SAN DIEGO, CA 92128
Project: NAVY SONAR PIER
Sampled By: [Signature]
Name/Signature

Phone: 858-267-5307 Turn Around Time
Fax: (562)-217-5310 Rush ☒
Normal ☐

Lab ID Number	Field ID	Date/Time Sampled	Bottle Type	No.	Preserv.	Matrix	Analyses Requested				Comments
							VOCs-9260	8270-5005	T-H-22	T-H-22	
	SUPPORT BEAM 1A	7/1/08	SAR	1	-	WOOD	X				
	SUPPORT BEAM 2A			1	-		X				
	SUPPORT BEAM 3A			1	-		X				
	SUPPORT BEAM 4			2	-		X	X			
	SUPPORT BEAM 5			2	-		X	X			
	DECK BOARD 1A			1	-		X				
	DECK BOARD 2A			1	-		X				
	DECK BOARD 3A			1	-		X				
	HAND RAIL 1A			1	-		X				
	HAND RAIL 2A			1	-		X				
	HAND RAIL 3A			1	-		X				

Relinquished: [Signature] Date / Time: 7/2/08 Received: _____
Dispatched: _____ Carrier: _____
I hereby authorize the performance of the above indicated tests.
[Signature] Received by lab: R. Taylor
7-2-08 11:00
YES NO NONE
Custody seal(s) in tact upon receipt by lab?

CAL TECH Environmental Laboratories



6814 Rosecrans Avenue, Paramount, CA 90723-3146
Telephone: (562) 272-2700 Fax: (562) 272-2789

ANALYTICAL RESULTS*

CTEL Project No: CT-0807041B
Client Name: Essentia
12396 World Trade Dr. Suite 306
San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am
Date Received: 07/03/08 @ 11:00 am
Date Analyzed: 07/20/08

Matrix: TCLP

Laboratory ID: Client Sample ID:	0807-041-1 Support B. 1A	0807-041-6 Deck B. 1A	0807-041-7 Deck B. 2A	Method	Units	Detection Limit
SVOC	See Attached	See Attached	See Attached	EPA 8270C	ug/L	

ND = Not Detected at the indicated Detection Limit

Client Project No: CT-0807041B
Client Name: Essentia
 12396 World Trade Dr. Suite 306
 San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier

Date Sampled: 07/01/08 @ 11:00 am
Date Received: 07/03/08 @ 11:00 am
Date Analyzed: 07/20/08

Matrix: TCLP

Laboratory ID:	0807-041-8	0807-041-9	0807-041-10	Method	Units	Detection Limit
Client Sample ID:	Deck B. 3A	Hand Rail 1A	Hand Rail 2A			
SVOC	See Attached	See Attached	See Attached	EPA 8270C	ug/L	

ND = Not Detected at the indicated Detection Limit

CTEL Project No: CT-0807041B
Client Name: Essentia
12396 World Trade Dr. Suite 306
San Diego, CA 92128
Attention: Mr. Travis Stravasnik

Phone: (858) 217-5307
Fax: (858) 217-5310

Project ID:
Project Name: Navy Sonar Pier

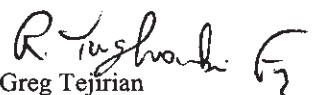
Date Sampled: 07/01/08 @ 11:00 am
Date Received: 07/03/08 @ 11:00 am
Date Analyzed: 07/20/08

Matrix: TCLP

Laboratory ID: 0807-041-11
Client Sample ID: Hand Rail 3A

		Method	Units	Detection Limit
SVOC	See Attached	EPA 8270C	ug/L	

ND = Not Detected at the indicated Detection Limit


Greg Tejrion
Laboratory Director

*The results are base upon the sample received.

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424



Alpha Scientific Corporation
Environmental Laboratories

Client: Cal Tech Environmental Laboratories
Project: 07-041

Lab Job No.: CA807151
Matrix: TCLP-Extracts

Date Reported: 07-31-2008
Date Sampled: 07-01-2008

EPA 8270C (Semi-VOCs by GC/MS, TCLP)
Reporting Unit: ug/L (ppb)

DATE ANALYZED	07-30	07-30-08	07-30-08	07-30-08	07-30-08	
DATE EXTRACTED	07-30	07-30-08	07-30-08	07-30-08	07-30-08	
DILUTION FACTOR	1	1	1	1	1	
LAB SAMPLE I.D.		CA807151-1	CA807151-2	CA807151-3	CA807151-4	
CLIENT SAMPLE I.D.		07-741-01- Suppot Beam 1A	07-741-06- Deck Board 1A	07-741-07- Deck Board 2A	07-741-08- Deck Board 3A	
COMPOUND	MDL	MB				
2-Methylphenol (o-cresol)	100	ND	2,990	ND	ND	ND
m-cresol	100	ND	ND	ND	ND	ND
4-Methylphenol (p-cresol)	100	ND	6,290	198	1,060	490
1,4-Dichlorobenzene	100	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	100	ND	ND	ND	ND	ND
Hexachlorobenzene	100	ND	ND	ND	ND	ND
Hexachlorobutadiene	100	ND	ND	ND	ND	ND
Hexachloroethane	100	ND	ND	ND	ND	ND
Nitrobenzene	100	ND	ND	ND	ND	ND
Pentachlorophenol	100	ND	ND	6,930	5,360	6,840
Pyridine	100	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	100	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	100	ND	ND	ND	ND	ND

MDL: Method Detection Limit;
ND: Not Detected (below MDL).
MB: Method Blank
J: Trace value.



Alpha Scientific Corporation
Environmental Laboratories

Client: Cal Tech Environmental Laboratories
Project: 07-041

Lab Job No.: CA807151
Matrix: TCLP-Extracts

Date Reported: 07-31-2008
Date Sampled: 07-01-2008

EPA 8270C (Semi-VOCs by GC/MS, TCLP)
Reporting Unit: ug/L (ppb)

DATE ANALYZED		07-30	07-30-08	07-30-08	07-30-08		
DATE EXTRACTED		07-30	07-30-08	07-30-08	07-30-08		
DILUTION FACTOR		1	1	1	1		
LAB SAMPLE I.D.			CA807151-5	CA807151-6	CA807151-7		
CLIENT SAMPLE I.D.			07-741-09- Hand Rail 1A	07-741-10- Hand Rail 2A	07-741-11- Hand Rail 3A		
COMPOUND	MDL	MB					
2-Methylphenol (o-cresol)	100	ND	ND	ND	ND		
m-cresol	100	ND	ND	ND	ND		
4-Methylphenol (p-cresol)	100	ND	135	145	ND		
1,4-Dichlorobenzene	100	ND	ND	ND	ND		
2,4-Dinitrotoluene	100	ND	ND	ND	ND		
Hexachlorobenzene	100	ND	ND	ND	ND		
Hexachlorobutadiene	100	ND	ND	ND	ND		
Hexachloroethane	100	ND	ND	ND	ND		
Nitrobenzene	100	ND	ND	ND	ND		
Pentachlorophenol	100	ND	1,200	2,710	1,100		
Pyridine	100	ND	ND	ND	ND		
2,4,5-Trichlorophenol	100	ND	ND	ND	ND		
2,4,6-Trichlorophenol	100	ND	ND	ND	ND		

MDL: Method Detection Limit;
ND: Not Detected (below MDL).
MB: Method Blank
J: Trace value.



Roobik Yaghoubi <caltechlabs@gmail.com>

TCLP analyses for Navy Sonar Piers, Long Beach

Travis Stravasnik <travis_stravasnik@essentia-llc.com>

Mon, Jul 28, 2008 at 10:44 AM

To: caltechlabs@gmail.com

Roobik,

As we discussed on the phone, I need to have TCLP for SVOCs on a number of samples. The identifiers are:

Support Beam 1

Deck Board 1

Deck Board 2

Deck Board 3

Hand Rail 1

Hand Rail 2

Hand Rail 3

07-041-B

Let me know if there would be any cost savings to test for pentachlorophenol only. Thanks,

Travis Stravasnik

Essentia Management Services LLC

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